IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. When strikethrough cannot easily be perceived, or when five or fewer characters are deleted, [[double brackets]] are used to show the deletion. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claims 1, 4 and 9 in accordance with the following:

1. (currently amended) A polymeric electrolyte comprising a cross-linked polyether urethane prepared by reacting a pre-polymer having a polyethylene oxide backbone and terminated with NCO, with a cross-linking agent selected from the group consisting of glycerol ethoxylate and glycerol propoxylate, an organic solvent and a lithium salt,

wherein a concentration of the lithium salt in the cross-linked polyether urethane is approximately 0.5 to 2.0 M.

2. (original) The polymeric electrolyte according to claim 1, wherein the pre-polymer is obtained by reacting isocyanate with a glycol selected from the group consisting of polyethylene glycol, polypropylene glycol and a combination thereof.

3. (original) The polymeric electrolyte according to claim 2, wherein the isocyanate is at least one selected from the group consisting of tolylene 2,4-diisocyanate, tolylene 2,6-diisocyanate, diphenylmethane 4,4'- diisocyanate, hexamethylene diisocyanate, diphenylmethane diisocyanate, isophoprone diisocyanate, triphenylmethane diisocyanate, tris-(isocyanatephenyl) thiophosphate, lysine ester triisocyanate, 1,8-diisocyanate-4-isocyanatemethylocartane, undecane 1,6,11-triisocynate, hexamethylene 1,3,6-trisisocyanate and bicycloheptane triisocyanate.

4. (currently amended) The polymeric electrolyte according to claim 1, wherein the cross-linking agent ~~is~~ includes further at least one selected from the group consisting of ~~glycerol ethoxylate, glycerol propoxylate,~~ 3-methyl-1,3,5-pentanetriol and caprolactone.

5. (original) The polymeric electrolyte according to claim 1, wherein the lithium salt is at least one selected from the group consisting of lithium perchlorate ($LiClO_4$), lithium tetrafluoroborate ($LiBF_4$), lithium hexafluorophosphate ($LiPF_6$), lithium trifluoromethanesulfonate ($LiCF_3SO_3$) and lithium bistrifluoromethanesulfonyl amide ($LiN(CF_3SO_2)_2$).

6. (original) The polymeric electrolyte according to claim 1, wherein the organic solvent is at least one solvent selected from the group consisting of propylene carbonate, ethylene carbonate, dimethyl carbonate, methylethyl carbonate, diethyl carbonate and vinylene carbonate.

7. (original) The polymeric electrolyte according to claim 1, wherein a total weight of the organic solvent and the lithium salt is 3 to 30 times that of the pre-polymer.

8. (cancelled)

9. (currently amended) A method of preparing a cross-linked polyether polymeric electrolyte comprising:

mixing a pre-polymer having a polyethylene oxide backbone and terminated with NCO, with a cross-linking agent selected from the group consisting of glycerol ethoxylate and glycerol propoxylate, an organic solvent and a lithium salt, to obtain a mixture and

cross-linking the mixture to obtain a concentration of the lithium salt in the cross-linked polyether electrolyte of approximately 0.5 to 2.0 M.

10. (original) The method according to claim 9, wherein the cross-linking comprises heating the mixture at a temperature in a range from 25 to 65°C.

11. (previously presented) A lithium battery comprising:

a cathode;

an anode; a cross-linked polyether urethane polymeric electrolyte interposed between the cathode and the anode, and prepared by reacting a pre-polymer having a polyethylene oxide backbone and terminated with NCO, a cross-linking agent, an organic solvent and a lithium salt; and

a separator having a network structure and made of an insulating resin, between the cathode and the anode.

12. (original) The lithium battery according to claim 11, wherein the cross-linking agent is at least one selected from the group consisting of glycerol ethoxylate, glycerol propoxylate, 3-methyl-1,3,5-pentanetriol and caprolactone.

13. (original) The lithium battery according to claim 11, wherein the isocyanate is at least one selected from the group consisting of tolylene 2,4-diisocyanate, tolylene 2,6-diisocyanate, diphenylmethane 4,4'- diisocyanate, hexamethylene diisocyanate, diphenylmethane diisocyanate, isophoprone diisocyanate, triphenylmethane diisocyanate, tris-(isocyanatephenyl) thiophosphate, lysine ester triisocyanate, 1,8-diisocyanate-4-isocyanatemethylocartane, undecane 1,6,11-triisocynate, hexamethylene 1,3,6-trisisocyanate and bicycloheptane triisocyanate.

14. (original) The lithium battery according to claim 11, wherein the lithium salt is at least one selected from the group consisting of lithium perchlorate ($LiClO_4$), lithium tetrafluoroborate ($LiBF_4$), lithium hexafluorophosphate ($LiPF_6$), lithium trifluoromethanesulfonate ($LiCF_3SO_3$) and lithium bistrifluoromethanesulfonyl amide ($LiN(CF_3SO_2)_2$).

15. (original) The lithium battery according to claim 11, wherein the organic solvent is at least one solvent selected from the group consisting of propylene carbonate, ethylene carbonate, dimethyl carbonate, methylethyl carbonate, diethyl carbonate and vinylene carbonate.

16. (original) The lithium battery according to claim 11, wherein the total weight of the organic solvent and lithium salt is 3 to 30 times that of the pre-polymer.

17. (original) The lithium battery according to claim 16, wherein a concentration of the lithium salt in the cross-linked polyether urethane is 0.5 to 2M.

18. (cancelled)

19. (original) The lithium battery according to claim 11, wherein the separator is formed of one selected from the group consisting of polypropylene, polyethylene and a combination thereof.

20. (withdrawn) A method of manufacturing a lithium battery comprising:

mixing a pre-polymer having a polyethylene oxide backbone and terminated with NCO, with a cross-linking agent, an organic solvent and a lithium salt, to obtain a mixture;

casting the mixture on a surface of at least one of a cathode and an anode so as to be between the cathode and the anode; and

cross-linking the resultant product.

21. (withdrawn) The method according to claim 20, wherein the cross-linking comprises heating the resultant product at a temperature in a range from 25 to 65°C.

22. (withdrawn) A method of manufacturing a lithium battery comprising:

mixing a pre-polymer having a polyethylene oxide backbone and terminated with NCO, with a cross-linking agent, an organic solvent and a lithium salt, to obtain a mixture;

interposing a separator between a cathode and an anode to form an electrode assembly and accommodating the electrode assembly into a battery case; and

injecting the mixture into the battery case having the electrode assembly and cross-linking the resultant product.

23. (withdrawn) The method according to claim 22, wherein the separator is formed of one selected from the group consisting of polypropylene, polyethylene and a combination thereof.

24. (withdrawn) The method according to claim 22, wherein the cross-linking comprises heating the resultant product at a temperature in a range from 25 to 65°C.

25. (original) The lithium battery according to claim 11, wherein the cathode or the anode comprises:

a current collector;

an electrode active material layer formed on the current collector, the electrode active material layer comprising:

an electrode active material,

a binder,

a conductive agent, and

a solvent.

26. (withdrawn) The method according to claim 20, further comprising:

forming an electrode active material layer by adding an electrode active material, a binder, a conductive agent, and a solvent; and

coating the electrode active material layer on a current collector, to obtain the cathode or the anode.

27. (withdrawn) The method according to claim 20, further comprising:

forming an electrode active material layer by adding an electrode active material, a binder, a conductive agent, and a solvent;

coating the electrode active material layer on a support body;

peeling the electrode active material from the support body; and

laminating the peeled electrode active material on a current collector, to obtain the cathode or the anode.

28. (withdrawn) The method according to claim 22, further comprising:

forming an electrode active material layer by adding an electrode active material, a binder, a conductive agent, and a solvent, and

coating the electrode active material layer on a current collector, to obtain the cathode or the anode.

29. (withdrawn) The method according to claim 22, further comprising:

forming an electrode active material layer by adding an electrode active material, a binder, a conductive agent, and a solvent;

coating the electrode active material layer on a support body;

peeling the electrode active material from the support body; and

laminating the peeled electrode active material on a current collector, to obtain the cathode or the anode.

30. (withdrawn) A method of manufacturing a lithium battery comprising:

mixing a pre-polymer having a polyethylene oxide backbone and terminated with NCO, with a cross-linking agent, an organic solvent and a lithium salt, to obtain a mixture;

forming an electrode assembly with the cathode and the anode, and accommodating the electrode assembly into a battery case; and

injecting the mixture into the battery case having the electrode assembly and cross-linking the resultant product.